Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) A method for detecting an open winding condition in a motor, the method comprising:

a. measuring a winding voltage, a winding current and a motor speed;

b. calculating a residue voltage for the winding, the residue voltage equaling the difference between a measured voltage drop across the winding and a calculated voltage drop for ~~the winding, the voltage drop calculated for~~ a non-open winding condition as a function of the measured winding current and motor speed; and

c. comparing the residue voltage to a threshold value.

2. (original) A method according to claim 1, further including:

d. signaling when the residue voltage exceeds the threshold value, to declare an open winding condition.

3. (currently amended) A method for detecting an open winding condition in a dual-stator redundant motor, the method comprising:

a. measuring a first stator winding voltage, a first stator winding current and the motor speed;

b. computing a first residue voltage for the first stator winding, the first residue voltage equaling the difference between a measured voltage drop across the first stator winding and a calculated voltage drop value for a non-open first stator winding as a function of the measured first stator winding current and motor speed;

c. measuring a second stator voltage across a second stator winding and a second current through the second stator winding;

d. calculating a second residue voltage for the second stator winding, the second residue voltage equaling the difference between a measured voltage drop across the second stator winding and a calculated voltage drop value for a non-open second stator winding as a function of the measured second stator winding current and motor speed;

e. calculating a residue voltage difference equal to the magnitude of the difference between the first residue voltage and the second residue voltage; and

f. comparing the residue voltage difference to a threshold value.

4. (original) A method according to claim 3, the method further including:

g. signaling when the residue voltage difference exceeds the threshold value, to declare an open winding condition .

5. (original) A method according to claim 4, the method further including:

h. signaling when the first residue voltage exceeds a first residue threshold value to declare an open winding condition .

6. (original) A method according to claim 3, the method further including compensating for measurement delay before calculating a residue voltage difference.